Under the Paperwork Reduction Act of 1995. TRANSMITTAL FORM (to be used for all correspondence after initial to total Number of Pages in This Submission	Application Nun Filing Date First Named Inv	U.S. Patent and Trademark spond to a collection of information unber 10/826,153 April 16, 2004 ventor Scher 1645	PTO/SB/21 (02-04) If for use through 07/31/2006. OMB 0651-0031 Office; U.S. DEPARTMENT OF COMMERCE unless it displays a valid OMB control number.
Fee Transmittal Form	Drawing(s)	(Check all that apply)	After Allowance communication to Technology Center (TC)
Fee Attached Amendment/Reply After Final Affidavits/declaration(s) Extension of Time Request Express Abandonment Request Information Disclosure Statement Certified Copy of Priority Document(s) Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53	Licensing-related Petition Petition to Conver Provisional Applic Power of Attorney	t to a ation Revocation pondence Address er PTO I return	Appeal Communication to Board of Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) Proprietary Information Status Letter Other Enclosure(s) (please Identify below): Form 1449 (6 pages), 75 references, a receipt postcard
		T, ATTORNEY, OR AGE	ENT
Firm or Individual name Signature Date CE I hereby certify that this correspondence is be sufficient postage as first class mail in an envithe date shown below. Typed or printed name Michelle Chan	ERTIFICATE OF TRA	NSMISSION/MAILING the USPTO or deposited with hissioner for Patents, P.O. Box	the United States Postal Service with 1450, Alexandria, VA 22313-1450 on

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Signed:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No.

10/826,153

Confirmation No.:

8584

Applicant Filed

Erik C. Scher et al. April 16, 2004

TC/A.U.

1645

Examiner

Docket No.

01-002001

Customer No.

33140

Title

Nanocrystal Taggants

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

The references cited on the attached form PTO-1449 are being called to the attention of the Examiner. Pursuant to 1276 OG 55 dated August 5, 2003, Applicants are not providing copies of US patents and/or publications as this application was filed after June 30, 2003. A copy of all non-US patent or publication reference is enclosed.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is made that a search has been conducted or that this statement encompasses all possible relevant information.

Appl. No. 10/826,153 Erik C. Scher et al. Information Disclosure Statement

Applicants believe that no fee is required for submission of this statement, since it is being submitted within three months of the filing date or prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to charge such fee to Deposit Account No. 03-0177. Please charge any additional fees or credit any overpayment to the above-noted deposit account.

Respectfully submitted,

Andrew L. Filler Reg. No. 44,107

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Tel: 650-331-2176 Fax: 650-331-2101

Substitute for form 1449A/PTO Complete if Known TRADAN **Application Number** 10/826,153 ORMATION DISCLOSURE Filing Date April 16, 2004 STATEMENT BY APPLICANT First Named Inventor Scher Art Unit (use as many sheets as necessary) **Examiner Name** Attorney Docket Number Sheet of 01-002001

Examiner	Cite	Document No.	J.S. PATENT DC	Name of Patentee or Applicant	Pages, Columns, lines, Where Relevant Passages or Relevant
nitials	No.	Number - Kind Code (if known)	MM-DD-YYYY	of Cited Document	Figures Appeal
	AA	US-3,996,345	12-07-1976	Ullman et al.	
	AB	US-4,637,988	01-20-1987	Hinshaw et al.	
	AC	US-4,777,128	10-11-1988	Lippa	
	AD	US-5,262,357	11-16-1993	Alivisatos et al.	
,	AE	US-5,293,050	03-08-1994	Chapple-Sokol et al.	·
	AF	US-5,304,786	04-19-1994	Pavlidis et al.	
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	AK	US-5,492,080	02-20-1996	Ohkawa et al.	
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	AP	US-5,537,000	07-16-1996	Alivisatos et al.	
	AQ	US-5,541,948	07-30-1996	Krupke et al.	
	AR	US-5,565,324	10-15-1996	Still et al.	-
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	ВА	US-5,789,162	08-04-1998	Dower et al.	
Examine Signatur			1	Date Considered	

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INFOR	MATION DISCLOSURE	Filing Date	April 16, 2004
STATE	MENT BY APPLICANT	First Named Inventor	Scher
		Art Unit	
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Sheet	of	Attorney Docket Number	01-002001

BI	В	US-5,985,353	11-16-1999	Lawton et al.	
В	С	US-5,990,479	11-23-1999	Weiss et al.	
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		FOREIG	IN PATENT DO	CUMENTS	•	
Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т
	BJ	WO-9529473	11-02-1995	Univ. Hertfordshire		
	ВК	WO-9804740	02-05-1998	Univ. Northwestern		
	BL	WO-9819963	05-14-1998	Spectra		
	ВМ	WO-9833070	07-30-1998	Krauledat		
	BN	WO-9836376	08-20-1998	Spectra		
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	BQ	WO-0027365	05-18-2000	Biocrystal .		
	BR	WO-0027436	05-18-2000	Biocrystal		Г
	BS	WO-0028088	05-18-2000	Biocrystal		Ì
	вт	WO-0028089	05-18-2000	Biocrystal		T

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	т
	BU	Alivisatos, A.P. "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals" J. Phys. Chem. (1996) 100:13226-132396	
	BV	Alivisatos, A.P. "Semiconductor Clusters, Nanocrystals, and Quantum Dots," Science, 271:933-937	

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BW	Alivisatos, A.P. et al., "Organization of `nanocrystal molecules` using DNA," Nature (1996) 382:609-611	
BX	Baldwin, J.J. et al., "Synthesis of a Small Molecule Combinatorial Library Encoded with molecular Tags" J. Am. Chem. Soc. (1995) 117:5588-5589	
BY	Bawendi, M.G. et al., "Luminescence properties of CdSe quantum crystallites: resonance between interior and surface localized states," J. Chem. Phys. (1992) 96(2):946-954	
BZ	Beverloo, H.B. et al., "Preparation and Microscopic Visualization of Multicolor Luminescent Immunophosphors," Cytometry (1992) 13:561-570	
CA	Bruchez, M. et al., "Semiconductor Nanocrystals as Fluorescent Biological Lables" Science (1998) 281:2013-2016	
СВ	Bruchez, M. et al., "Semiconductor nanocrystals as fluorescent probes for biology," Cytometry, Supplement 9, p. 26, Mar., 1998	
CC	Chan, W.C.W. et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection" Science (1998) 281:2016-2018	
CD	Chee, M. et al., "Accessing Genetic Information with High-Density DNA Arrays" Science (1996) 274(5287):610-614	
CE	Coffer, J.L. et al., "Characterization of quantum-confined CdS Nanocrystallites stabilized by deoxyribonucleic acid (DNA)" Nanotechnology (1992) 3:69-76	
CF	Colvin, V.L. et al., "Light-emitting diodes made from cadmium selenide nanocrystals and a semiconducting polymer" Nature (1994) 370(6488):354-357	
CG	Cook, "Scintillation proximity assay: a versatile high-throughput screening technology," Drug Discovery Today (1996) 1:287-294	-
СН	Correa-Duarte, M.A. et al., "Stabilization of CdS semiconductor nanoparticles photodegradation by silica coating procedure," Chem. Phys. Lett. (1998) 286:497-501	
CI	Czarnik, A.W., "Encoding methods for combinatorial chemistry" Curr Opin Chem Biol. (1997) 1(1):60-6	
CJ	Dabbousi, B.O. et al., "Electroluminescence from CdSe quantum-dot/polymer composites" Appl. Phys. Lett. (1995) 66(11):1316-1318	
СК	Dabbousi, B.O. et al., "(CdSe)ZnS core-shell quantum dots: synthesis and characterization of a size series of highly luminescent nanocrystallites" J. of Phys. Chem. B (1997) 101(46):9463-9475	
CL	Danek, M. et al., "Synthesis of Luminescent Thin-Film CdSe/ZnSe Quantum Dot Composites Using CdSe Quantum Dots Passivated with an Overlayer of ZnSe" Chem. Mater. (1996) 8(1):173-180	

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	СМ	Egner, B.J. et al., "Tagging in combinatorial chemistry: the use of coloured and fluorescent bads" Chem. Commun. (1997) 735-736
	CN	Empedocles, S.A. et al., "Photoluminescence Spectroscopy of Single CdSe Nanocrystallite Quantum Dots" Phys. Res. Lett. (1996) 77(18):3873-3876
	СО	Empedocles et al., "Quantum-Confined Stark Effect in Single CdSe Nanocrystallite Quantum Dots" Science 278:2114-2117, Dec. 1997
-	СР	Fodor, S.P.A., "DNA Sequencing: Massivley Parallel Genomics" Science (1997) 277(5324):393-395
	CQ	Fox, M.A. et al., "Fluorescence and Redox Activity of Probes Anchored through an Aminotrithiol to Polycrystalline Gold" Langmuir (1998) 14:816-820
	CR	Gan, L.M. et al., "Enhanced Photoluminescence and Characterization of Mn-Doped ZnS Nanocrystallites Synthesized in Microemulsion" Langmuir (1997) 13:6427-6431
	CS	Gao, M. et al., "Strongly Photoluminescent CdTe Nanocrystals by Proper Surface Modification," J. Phys. Chem. (1998) 102:8360-8363
	СТ	Guha, S. et al., "Hybrid organic-inorganic semiconductor-based light-emitting diodes" J. Appl. Phys. (1997) 82(8):4126-4128
	CU	Hines, M.A. et al., "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals" J. Phys. Chem. (1996) 100:468-471
	CV	Jacoby, M. "Quantum dots meet biomolecules" C&E News :8, Sep. 28, 1998
	CW	Jarvis, R.F. et al., "Solution Synthesis and Photoluminescence Studies of Small Crystallites of Cadmium Telluride," Mat. Res. Soc. Symp. Proc. (1992) 272:229-234
	СХ	Kagan, C.R. et al., "Electronic Energy Transfer in CdSe Quantum Dot Solids," Physical Review Letters (1996) 76(9):1517-1520
	CY	Kagan, C.R. et al., "Long-range resonance transfer of electronic excitations in close-packed CdSe quantum-dot solids," Physical Review B, 54(12):8633-8643, Sep. 15, 1996-II
	CZ	Kortan, A.R. et al., "Nucleation and Growth of CdSe on ZnS Quantum Crystallite Seeds, and Vice Versa, In Inverse Micelle Media" J. Am Chem. Soc. (1990) 112:1327-1332
	DA	Kuno, M. et al., "The band edge luminescence of surface modified CdSe nanocrystallites: Probing the luminescing state" J. Chem. Phys. (1997) 106(23):9869-9882
	DB	Lawless, D. et al., "Bifunctional Capping of CdS Nanoparticles and Bridging to TiO.sub.2 " J. Phys. Chem. (1995) 99:10329-10335, 1995
	DC	Lee, J-K. et al., "Surface Derivatization of Nanocrystalline CdSe Semiconductors," Mat. Res. Soc. Symp. Proc. (1997) 452:323-328
	DD	Liz-Marzan, L.M. et al., "Synthesis of Nanosized Gold-Silica Core-Shell Particles" Langmuir, (1996) 12(18):4329-4335

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Sheet	of		Attorney Docket Number	01-002001

DE	Mahtab, R. et al., "Protein-Sized Quantum Dot Luminescence Can Distinguish between 'Straight', 'Bent', and 'Kinked' Oligonucletides", J. Am. Chem. Soc. (1995) 117:9099-9100
DF	Mahtab, R. et al., "Preferential-absorption of a `kinked` DNA to a newtral curved surface: comparison to and implications for nonspecific DNA-protein interactions," J. Am. Chem. Soc. (1996) 118:7028-7032
DG	Matsumoto, H. et al., "Preparation of Monodisperse CdS Nanocrystals by Size Selective Photocorrosion" J. Phys. Chem. (1996) 100(32):13781-13785
DH	McGall, G. et al., "Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists" Proc. Natl. Acad. Sci. USA (1996) 93:13555-13560
DI	Michael, K.L. et al., "Randomly Ordered Addressable High-Density Optical Sensor Arraays" . Analyt. Chem. (1998) 70(7):1242-1248
DJ	Mikulec, F.V. et al., "Synthesis and Characterization of Highly Luminescent (CdSe)ZnS Quantum Dots," Materials Research Society Symposium (1997) 452:359-364
DK	Mikulec, F.V. et al., Poster, Entitled "Fluorescent Semiconductor Nanocrystallites Derivatized With Biomolecules," Presented at the 216th National Meeting of the American Chemical Society Aug. 23-27, 1998
DL	Moran, E.J. et al., "Radio Frequency Tag Encoded Combinatorial Library Method for the Discovery of Tripeptide-Substituted Cinnamic Acid Inhibitors of the Protein Tyrosine Phosphatase PTP1B" J. Am. Chem. Soc. (1995) 117:10787-10788
DM	Mullenborn, M. et al., "Characterization of Solution-Synthesized CdTe and HgTe," Applied Physics (1993) 56:317-32
DN	Murphy, C.J. et al., "Quantum dots as inorganic DNA-binding proteins," Mat. Res. Soc. Symp. (1997) 452:597-600
DO	Murray, C.B. et al., "Synthesis and Characterization of Nearly Monodisperse CdE (E=S, Se, Te) Semiconductor Nanocrystallites" J. Am. Chem. Soc. (1993) 115(19):8706-8715
DP	Nicolaou, K.C. et al., "Radiofrequency Encoded Combinatorial Chemistry" Ingew. Chem. Int. Ed. Engl. (1995) 34(20):2289-2291
DQ	Nirmal, M. et al., "Fluorescence Intermittency in single Cadmium Selenide Nanocrystals" Nature (1996) 383:802-804
DR	Pehnt, M. et al., "Nanoparticle Precursor Route to Low-Temperature Spray Deposition of CdTe Thin Films," Appl. Phys. Lett. (1995) 67(15):2176-2178
DS	Peng, X. et al., "Epitaxial Growth of Highly Luminescent CdSe/CdS Core/Shell Nanocrystals with Photostability and Electronic Accessibility," J. Am. Chem. Soc. (1997) 119:7019-7029
DT	Peng, X. et al., "Synthesis and Isolation of a Homodimer of Cadmium Selenide Nanocrystals," Angewandte Chemie (1997) 36:145-147

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DU	Plunkett, M.J. et al., "Combinatorial chemistry and new drugs" Sci Am (1997) 276(4):68-73	
DV	Rajh, T. et al., "Synthesis and Characterization of Surface-Modified Colloidal CdTe Quantum Dots" J. Phys. Chem. (1993) 97:11999-12003	
DW	Rogach, A.L. et al., "Synthesis and characterization of Thiol-Stabilized CdTe Nanocrystals" Ber. Bunsenges. Phys. Chem. (1996) 100(11):1772-2778	
DX	Sambrook, J. et al., Molecular Cloning: A Laboratory Manual: Second Edition, Cold Spring Harbor Press, p. 12.14, 1989	
DY	Schrock, E. et al., "Multicolor Spectral Karyotyping of Human Chromosomes," Science (1996) 273:494-497	
DZ	Service, R.F. "Semiconductor Beacons Light Up Cell Structures" Science (1998) 281:1930-1931	
EA	Spanhel, L. et al., "Photochemistry of Colloidal Semiconductors. Surface Modification and Stability of Strong Luminescing CdS Particles" J. Am. Chem. Soc. (1987) 109(19):5649-5655	
EB	Steigerwald, M.L. et al., "Surface Derivatization and Isolation of Semiconductor Cluster Molecules," J. Am. Chem. Soc. (1988) 110:3046-3050	
EC	Wang, D.G. et al., "Large-Scale Identification, Mapping, and Genotyping of Single-Nucleotide Polymorphisms in the Human Genome" Science (1998) 280:1077-1082	
ED	Whitesell, J.K. et al., "Directionally Aligned Helical Peptides on Surfaces" Science (1993) 261:73-76	
EE	Winzeler, E.A. et al., "Direct Allelic Variation Scanning of the Yeast Genome" Science (1998) 281:1194-1197	
EF	Zhang, Y-Z. et al., "Novel Flow Cytometry Compensation Standards: Internally Stained Fluorescent Microspheres With Matched Emission Spectra and Long-Term Stability," Cytometry (1998) 33:244-248	

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